Work Orden December-17-12		3		*944	113*					for a	Page 1
Revision ID:	D2353 Stiffener			Accept	*N900	040	100)* s	Setup Star	1 Z	S1*
	17/12/2012	Start Qty: 12.00 Req'd Qty: 12.00	*12* *12*		Cust Item I Customer:	D:			Stop	' *N	S2*
Approvals:		MLS	Date: 12-12-17			ate:		R	tun Star Stop	171	R1* R2*
Sequence ID/ Work Center II		peration escription		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revisio	on Nbr							~ · · · · · · · · · · · · · · · · · · ·		- Stamp
D2353	Rev C	!									
*100 *100* Waterjet FLOW CNC Waterjet 2024 :050	et	LOW WATER JET Memo 1-Cut as per Deburr if ne	Dwg D2353 Dwg Rev:_ cessary	0.00 0.00 Prog Rev:	2-			24	<u>o</u> _		Jm13-1-2
*110 *110* QC Quality Control	Q	C2- Inspect parts off m	achine FAI/FAIB	0.00	·			24			JM13-1-2
120 *120* QC	Qe	C8- Inspect parts - seco	nd check	0.00				ભા	1201.	2 5	(DAS
Quality Control		Memo		0.00					-10-01	oy_ - 3	8-89 H

											DQA:	Da	te: _	
NCR:	Yes / No				WORK ORDER NON-	100	NFORM	MAINCE / UP	DATE					
										QA	Closed:	Da	te:	
Work Orde	or.				DISPOSITION				AGAINST D	EPAR	TMENT	/PROCESS		
Work Orac					Rework	ן ן		Skid-tube	Crosstube	7		Water Jet		Engineering
Part N	No.				Scrap	1	i	Machining	Small Fab	1	Pro	d. Eng. Coor.	⊢⊣	Quality
					Use-as-is	1 !		noforming	Finishing	٦ F		re/Packaging	_	Other
NCR N	No				Work Order Update]		Large Fab	Composite]		Supplier		
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Root					ption of work order update		Initial	Ac	tion	Si	ign &			
Cause	Date	Step	Qty		or Non-conformance	Cr	nief Eng	Desc	ription	[Date	Verificatio	n	QC Inspector
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	Bending			.	Bend	\vdash	Grain		-	_	lized			Pressure/Forced
	—	Not Conce	ntric to	O/S	BOM/Route	\vdash	Hardwa		-	_	-	tolerance	<u></u>	Temperature/Cure
	Cracks			<u> </u>	Broken/Damaged	 	- 1 `	ion Incomplete	<u> </u>		t Incorre		-	Weld
	 -	//Crimped	-	<u> </u>	Burrs	-	4	ioris Incomplete	/Unclear	_	t Lost/M	-		Wrong Stock Pulled
	Cuffs			lacksquare	Contamination	<u>_</u>	Mainte		1	┥	t Moved			
1	Heat Tre	eat			Countersink	1	Mislabe	eled		Pos	itioned V	Vrong		

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

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94413

Page 2

Item ID: D2353 Accept *N900040100* Setup Start Revision ID: Item Name: Stiffener **Start Date:** 17/12/2012 Start Otv: 12.00 *12* Cust Item ID: **Required Date:** 02/01/2013 Reg'd Otv: 12.00 Customer: Reference: Run Start Approvals: Process Plan: Date: Tooling: Date: Stop QC: ____ Date:__ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Reject Accept Insp. Work Center ID Description **Run Hours** Qty Code Otv Number Stamp 130 0.00 *120* NC BRAKE Brake NC 0.00 Memo Brake NC Bend per Dwg D2353 140 QC5- Inspect part completeness to step on W/O *140* QC Memo Quality Control 150 Chemical Conversion Coat per QSI005 4.1 0.00 24 16 13-1:29 *150* HandFinish Memo 0.00 Hand Finishing

									DQA:	Date:	
NCR: Y	res / No				WORK ORDER NON-C	ONFOR	MANCE / UP	DATE			
									QA Closed:	Date:	
Work Orde	er:				DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Part N	No				Rework Scrap Use-as-is Work Order Update		Skid-tube Machining moforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	Initial	Ac	ction	Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Chief Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling											
Operator		1									
Material				-							
Setup											
Other										·	
Process		1									
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Unapproved											
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	Cracks				Broken/Damaged	Inspect	ion Incomplete		Part Incorre	ct	Weld
	Crushed	/Crimped	•		Burrs	Instruct	tions Incomplete	/Unclear	Part Lost/M	issing	Wrong Stock Pulled
	Cuffs				Contamination	Mainte	enance		Part Moved		_
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	Inspecti	on Strin in	Tuhe		Cut Too Short	Misrea	d		Power Loss/	/Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

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94413

Page 3

Item ID: Revision ID: Item Name:	D2353 Stiffener			Accept	*N90004	010	೧ *	Setup Start Stop	111.7
Start Date: Required Date: Reference:	17/12/2012 202/01/2013	Start Qty: 12.00 Req'd Qty: 12.00	*12* *12*		Cust Item ID: Customer:				
Approvals:		n:	Date:	Tooling: SPC (Y/N):	Date:	· · · - · · · · · · · · · · · · · · · ·		Run Start Stop	"INH1"
Sequence ID/ Work Center II 155 *155* QC Quality Control	D	Operation Description QC7-Inspect Chemical Co	onversion Coat	Set Up/ Run Hours 0.00	Tool ID Too	l# Plan Code		Qty	Reject Insp. Number Stamp
*160 *160* Powdercoat Powder Coating		Black Sandtex (Ref. 4.3.5.7) Memo STARISHINE	80 °	0.00 0.00 OVEN TEMPERATURE:			24		13-24. BL
170 *170* QC Quality Control		QC3- Inspect Part Finish Memo		0.00 0.00 SmB 13.2.4			24		· · · · · · · · · · · · · · · · · · ·

			-								DQA:	Date	:
NCR: Y	/es	/ No				WORK ORDER NON-C	CON	FORN	/IANCE / UP	DATE	·		
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Work Orde	or.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Work Orac	-'' -				 -	Rework			Skid-tube	Crosstube]	Water Jet	Engineering
Part N	lo.					Scrap			Machining	Small Fab	Proc	d. Eng. Coor.	Quality
	-					Use-as-is	1		oforming	Finishing	4	e/Packaging	Other
NCR N	No		·,· · · · · · · · · · · · · · · · · · ·			Work Order Update]		Large Fab	Composite]	Supplier	
Root					Descri	ption of work order update	ln	itial	Ac	tion	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Chie	ef Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling	Ш		,										
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Other							İ						
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Landi	ng G	ear				General					-	_	_
,	Ш	Bending				Bend		Grain			Ovalized		Pressure/Forced
j	Ш	Centre No	t Concer	ntric to	o/s	BOM/Route	<u></u>	Hardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		nspecti	on Incomplete		Part Incorred	ct _	Weld
		Crushed/0	Crimped.			Burrs		nstructi	ions Incomplete/	'Unclear	Part Lost/Mi	issing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		Part Moved	-	
		Heat Trea	t			Countersink		Mislabe	led		Positioned V	Vrong	
i		Inspection	n Strip in	Tube		Cut Too Short		Misread	l		Power Loss/	Surge	Other
		Ripples in	Bend			Drill Holes	\Box	Offset		_			

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

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Item ID: D2353 Accept *N900040100* Setup Start Revision ID: Item Name: Stiffener **Start Date:** 17/12/2012 **Start Qty: 12.00** Cust Item ID: **Required Date:** 02/01/2013 Req'd Qty: 12.00 **Customer:** Reference: Run Start Approvals: Process Plan: Date: Tooling: Date: Stop QC: _____ Date: ____ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Insp. Work Center ID Description **Run Hours** Code Qty Qty Number Stamp 180 Identify as per dwg & Stock Location (1) 0.00 *180* Packaging Memo 0.00 Packaging 2/2/6 rc 190 QC21- Final Inspection - Work Order Release 0.00 *1QN* QC Memo 0.00 Quality Control

NCR:	Yes	/	No

DQA: _____ Date: _____

NCR: Y	es / No				WORK ORDER NON-	CON	NFORM	MANCE / UP	PDATE			
										QA Closed:	Date:	
Work Orde	r:				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
					Rework	7	Skid-tube Crosstube			1	Water Jet	Engineering
Part N	o				Scrap]	1	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
					Use-as-is		Thern	noforming	Finishing	Rec/Stor	e/Packaging	Other
NCR N	0		<u> </u>		Work Order Update	┙╽		Large Fab	Composite]	Supplier	J ∐
Root				Descri	iption of work order update		nitial	Ad	ction	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desc	cription	Date	Verification	QC Inspector
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etup												
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Landin F				_	General		٠٠		_	۱, ,,		ا ، ا
}	Bending				Bend	\vdash	Grain		<u> </u>	Ovalized		Pressure/Forced
	_	ot Conce	ntric to (^{5)/S}	BOM/Route	\vdash	Hardwa		<u> </u>	Over/Under	<u> </u>	Temperature/Cure
}	Cracks	<i>.</i>		\vdash	Broken/Damaged	\perp	1	on Incomplete	<u> </u>	Part Incorred	-	Weld
}	_	Crimped.		<u> </u>	Burrs		ł	ions Incomplete,	/Unclear	Part Lost/Mi	issing	Wrong Stock Pulled
}	Cuffs			_	Contamination	-	Mainte		_	Part Moved		
	Heat Tre			<u> </u>	Countersink	-	Mislabe		<u> </u>	Positioned V		ا
	⊣ '	n Strip in	Tube	<u> </u>	Cut Too Short		Misread	i		Power Loss/	Surge	Other
Ļ	Ripples in			<u> </u>	Drill Holes	\vdash	Offset					
Ļ		Vaves in 8		۱	Drawing	_	1	Calibration				
		Sequence			Finish	-	1	Sequence				
	Wave/Tv	vist in Tul	oe e		Folio		Outside	Dimensions				

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Picklist Print

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Work Order ID: 94413

94413

Parent Item:

D2353

D2353

Parent Item Name: Stiffener

Start Date: 17/12/2012

Required Date: 02/01/2013

Start Qty: 12.00

Required Qty: 12.00

Comments:

IPP Rev: A Removed from 9 Digit 05-11-10 EC

IPP: B 06.11.15 waterjet

EC ec

IPP: c 06.12.07 ecn 836

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch		Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status	
M2024T3S.050		Purchased	No			100	sf	253.1968	0.1463	 _ 848				

M2024T3S 050

2024-T3 .050 sheet

X9178.4.0 Location

Loc Qty Loc Code MAT022 253.1968408 117684 22.4 121216 91.2968408 121889 139.5

Page 1

											DQA:	Dat	te:	
NCR:	Yes	/ No		•		WORK ORDER NON-C	100	NFORM	ANCE / UPI	DATE			-	
											QA Closed:	Dat	te:	
Work Orde	er.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS		
Part f	– _ No					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier		Engineering Quality Other
Root					Descri	ption of work order update	1	nitial	Act	tion	Sign &			
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	<u> </u>	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved			·											
							AUL	T CATE	GC _I RY					
Landi		ear Bending Centre No Cracks Crushed/O Cuffs Heat Trea	Crimped.		O/S	General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink		1 '	on Incomplete ions Incomplete/I nance		Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned N	ct issing		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled
	$\boldsymbol{\vdash}$	nspection		Tube		Cut Too Short		Misread	l		Power Loss/	Surge		Other
	F	Ripples in	Bend			Drill Holes	1	Offset						

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

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DART AEROSPACE LTD	Work Order:	94413
Description: Stiffener	Part Number:	D2353
Inspection Dwg: D2353 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X	First Article		Prototype
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Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
15.198	+/-0.010	15.198' 0965" 0.356"	_		T	Tkm06
0.966	+/-0.005	0965"	-		ν	Jkmo6 Jkmo1
0.354	+/-0.010	0,350	-		V	
0.128	+0.005/-0.000	0.136,	-		V	
				-		
			- CA 2			

		0/0		
Measured by: 」」った	Audited by:	09	Prototype Approval:	N/A
Date: 31-2	Date:	13-01-25	Date:	N/A

Rev	Date	Change	Revised by	Approved
L A	04.06.25	New Issue P/O D350-616-01	5 KJ/JLM	1
В	06.12.20	Dwg Rev. updated	KJ/JLM X	- 911



DRAWN BY DESIGN DART AEROSPACE LTD $\subset \mathcal{B}$ BW HAWKESBURY, ONTARIO, CANADA CHECKED APPROVED, DRAWING NO. REV. C D2353 SHEET 1 OF 1 DATE TITLE **SCALE STIFFENER** 06.11.13 1:2

